NEW SOURCE CONSTRUCTION PERMIT
and MINOR SOURCE OPERATING PERMIT
OFFICE OF AIR QUALITY

Koetter & Smith, Inc.
8991 Louis Smith Road
Borden, Indiana 47106

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-5.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Operation Permit No.: MSOP 043-13619-00054	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date:

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D.1.6 Record Keeping Requirements

SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

The Permittee owns and operates a wood mulching and wood chip manufacturing operation.

Authorized Individual:	Bill Miller
Source Address:	8991 Louis Smith Road, Borden, Indiana 47106
Mailing Address:	8991 Louis Smith Road, Borden, Indiana 47106
Phone Number:	812-923-5111
SIC Code:	2491
County Location:	Floyd
County Status:	Nonattainment for volatile organic compounds (VOC) Attainment for all other criteria pollutants
Source Status:	Minor Source, under PSD or Emission Offset Rules; Minor Source, Section 112 of the Clean Air Act

A.2 Emissions units and Pollution Control Equipment Summary

This stationary source is approved to construct and operate the following emissions units and pollution control devices:

(a) one (1) wood chip manufacturing operation consisting of one (1) 30 MMBtu/hr wood fired rotary dryer, designated as RD-01, with a maximum wood burning capacity of 1.58 tons/hr, drying wood chips at a maximum rate of 36,000 lb/hr, with emissions exhausted to stack RD-01,

(b) one (1) compost, mulch, and wood shaving storage area, with a maximum storage capacity of 40,000 tons and a maximum design throughput of 20,000 tons/yr, and

(c) one (1) wood mulching operation.

SECTION B GENERAL CONSTRUCTION CONDITIONS

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1.1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

B.1 Permit No Defense [IC 13]

This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

B.2 Definitions

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2, and 326 IAC 2-1.1-1 shall prevail.

B.3 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

B.4 Revocation of Permits [326 IAC 2-1.1-9(5)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.5 Modification to Permit [326 IAC 2]

Notwithstanding the Section B condition entitled “Minor Source Operating Permit”, all requirements and conditions of this construction permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

B.6 Minor Source Operating Permit [326 IAC 2-6.1]

This document shall also become a minor source operating permit pursuant to 326 IAC 2-6.1 when, prior to start of operation, the following requirements are met:

(a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), Permit Administration & Development Section.

(1) If the Affidavit of Construction verifies that the facilities covered in this Construction Permit were constructed as proposed in the application, then the facilities may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.

(2) If the Affidavit of Construction does not verify that the facilities covered in this Construction Permit were constructed as proposed in the application, then the Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section prior to beginning operation of the facilities.

(b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.

(c) Upon receipt of the Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section, the Permittee shall attach it to this document.

(d) The operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-1.1-7(Fees)**.**

(e) Pursuant to 326 IAC 2-6.1-7, the Permittee shall apply for an operation permit renewal at least ninety (90) days prior to the expiration date established in the validation letter. If IDEM, OAQ, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied. The operation permit issued shall contain as a minimum the conditions in Section C and Section D of this permit.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

C.1 Preventive Maintenance Plan [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) after issuance of this permit, including the following information on each emissions unit:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

(b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.

(c) PMP's shall be submitted to IDEM, OAQ, upon request and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

C.2 Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

(a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1.

(c) The Permittee shall notify the OAQ within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

C.3 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)] [326 IAC 2-6.1-5(a)(4)]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform

the following:

(a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under this title or the conditions of this permit or any operating permit revisions;

(c) Inspect, at reasonable times, any processes, emissions units (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit or any operating permit revisions;

(d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

C.4 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]

Pursuant to [326 IAC 2-6.1-6(d)(3)] :

(a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAQ, Permits Branch, within thirty (30) days of the change.

(b) The written notification shall be sufficient to transfer the permit to the new owner by an notice-only change pursuant to 326 IAC 2-6.1-6(d)(3).

(c) IDEM, OAQ, shall issue a revised permit.

The notification which shall be submitted by the Permittee does require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1.

C.5 Permit Revocation [326 IAC 2-1-9]

Pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to construct and operate may be revoked for any of the following causes:

(a) Violation of any conditions of this permit.

(b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.

(c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.

(d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.

(e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.6 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.7 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

Testing Requirements

C.8 Performance Testing [326 IAC 3-6]

(a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

(b) All test reports must be received by IDEM, OAQ within forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the “authorized individual” as defined by 326 IAC 2-1.1-1.

Compliance Monitoring Requirements

C.9 Monitoring Methods [326 IAC 3]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

Record Keeping and Reporting Requirements

C.10 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

(a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.

(b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.

(c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).

(d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.11 Monitoring Data Availability [326 IAC 2-6.1-2] [IC 13-14-1-13]

(a) With the exception of performance tests conducted in accordance with Section C-Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.

(b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.

(c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.

(d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.

(e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.

(f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.12 General Record Keeping Requirements [326 IAC 2-6.1-2]

(a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAQ representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Records of required monitoring information shall include, where applicable:

(1) The date, place, and time of sampling or measurements;

(2) The dates analyses were performed;

(3) The company or entity performing the analyses;

(4) The analytic techniques or methods used;

(5) The results of such analyses; and

(6) The operating conditions existing at the time of sampling or measurement.

(c) Support information shall include, where applicable:

(1) Copies of all reports required by this permit;

(2) All original strip chart recordings for continuous monitoring instrumentation;

(3) All calibration and maintenance records;

(4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.

(d) All record keeping requirements not already legally required shall be implemented when operation begins.

C.13 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

(a) To affirm that the source has met all the compliance monitoring requirements stated in this permit the source shall submit a Semi-annual Compliance Monitoring Report. Any deviation from the requirements and the date(s) of each deviation must be reported. The Compliance Monitoring Report shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(d) Unless otherwise specified in this permit, the semi-annual report shall be submitted within thirty (30) days of the end of the reporting period. The report does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(e) All instances of deviations must be clearly identified in such reports. A reportable deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:

(1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or

(2) A malfunction as described in 326 IAC 1-6-2; or

(3) Failure to implement elements of the Preventive Maintenance Plan unless lack of maintenance has caused or contributed to a deviation.

(4) Failure to make or record information required by the compliance monitoring provisions of Section D unless such failure exceeds 5% of the required data in any calendar quarter.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred or failure to monitor or record the required compliance monitoring is a deviation.

(f) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.

(g) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

C.14 Annual Notification [326 IAC 2-6.1-5(a)(5)]

(a) Annual notification shall be submitted to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.

(b) Noncompliance with any condition must be specifically identified. If there are any permit conditions or requirements for which the source is not in compliance at any time during the year, the Permittee must provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be, achieved. The notification must be signed by an authorized individual.

(c) The annual notice shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in the format attached no later than March 1 of each year to:

Compliance Data Section, Office of Air Quality
Indiana Department of Environmental Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, IN 46206-6015

(d) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

one (1) wood chip manufacturing operation consisting of one (1) 30 MMBtu/hr wood fired rotary dryer, designated as RD-01, with a maximum wood burning capacity of 1.58 tons/hr, drying wood chips at a maximum rate of 36,000 lb/hr, with emissions exhausted to stack RD-01,

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards

D.1.1 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the wood chip manufacturing operation shall not exceed 30.08 pounds per hour per hour when operating at a process weight rate of 19.58 tons per hour.

Compliance Determination Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.2 Testing Requirements [326 IAC 2-1.1-11]

The Permittee is not required to test this emissions unit by this permit. However, IDEM may require compliance testing when necessary to determine if the emissions unit is in compliance. If testing is required by IDEM, compliance with the particulate matter (PM) limit specified in Condition D.1.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.1.3 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section C - Preventive Maintenance Plan, of this permit, is required for the emission units of this process and any control devices.

Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.4 Visible Emissions Notations

(a) Daily visible emission notations of the wood chip manufacturing operation stack (RD-01) exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.1.5 Failure Detection

In the event that bag failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

D.1.6 Record Keeping Requirements

(a) To document compliance with Condition D.1.4, the Permittee shall maintain records of daily visible emission notations of the wood chip manufacturing operation stack (RD-01) exhaust.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

Company Name: Koetter & Smith, Inc.	
Address:	**8991 Louis Smith Road**
City:	**Borden, Indiana 47106**
Phone #:	
MSOP #:	**043-13619-00054**

I hereby certify that Koetter & Smith, Inc. is **9** still in operation.
9 no longer in operation.

I hereby certify that Koetter & Smith, Inc. is **9** in compliance with the requirements of MSOP **043-13619-00054**.
9 not in compliance with the requirements of MSOP **043-13619-00054**.

Authorized Individual (typed):
Title:
Signature:
Date:

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

Noncompliance:

MALFUNCTION REPORT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
FAX NUMBER - 317 233-5967

This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?_____, 25 TONS/YEAR SULFUR DIOXIDE ?_____, 25 TONS/YEAR NITROGEN OXIDES?_____, 25 TONS/YEAR VOC ?_____, 25 TONS/YEAR HYDROGEN SULFIDE ?_____, 25 TONS/YEAR TOTAL REDUCED SULFUR ?_____, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?_____, 25 TONS/YEAR FLUORIDES ?_____, 100TONS/YEAR CARBON MONOXIDE ?_____, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?_____, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?_____, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?_____, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?_____. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF 'MALFUNCTION' AS LISTED ON REVERSE SIDE ? Y N
THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY:_____PHONE NO. ( )_____
LOCATION: (CITY AND COUNTY)_____
PERMIT NO. _____ AFS PLANT ID: _____ AFS POINT ID: _____ NSP:_____
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON:_____
_____
_

DATE/TIME MALFUNCTION STARTED: _____/_____/ 19____ _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION:
_____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE_____/_____/ 19____ _____ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER:_____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

_____
_

MEASURES TAKEN TO MINIMIZE EMISSIONS:_____
_____
_

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES:_____
CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS:_____
CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT:_____
INTERIM CONTROL MEASURES: (IF APPLICABLE)_____
_____
_
_____
_

MALFUNCTION REPORTED BY:_____TITLE:_____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY:_____DATE:_____TIME:_____

*SEE PAGE 2

Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

326 IAC 1-6-1 Applicability of rule

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

326 IAC 1-2-39 "Malfunction" definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

***Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

_____
_____
____

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Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a New Source Construction and Minor Source Operating Permit

Source Background and Description

Source Name:	Koetter and Smith, Inc.
Source Location:	8991 Louis Smith Road, Borden, IN 47106
County:	Floyd
SIC Code:	2491
Operation Permit No.:	043-13619-00054
Permit Reviewer:	SDF

The Office of Air Quality (OAQ) has reviewed an application from Koetter and Smith, Inc. relating to the construction and operation of the following:

(a) one (1) wood chip manufacturing operation consisting of one (1) 30 MMBtu/hr wood fired rotary dryer, designated as RD-01, with a maximum wood burning capacity of 1.58 tons/hr, drying wood chips at a maximum rate of 36,000 lb/hr, with emissions exhausted to stack RD-01,

(b) one (1) compost, mulch, and wood shaving storage area, with a maximum storage capacity of 40,000 tons and a maximum design throughput of 20,000 tons/yr, and

(c) one (1) wood mulching operation.

Permitted Emission Units and Pollution Control Equipment

There are no existing emission units or equipment at this facility that require an air permit.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

Existing Approvals

There are no existing emission units or equipment at this facility that require an air permit.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
RD-01	rotary dryer	20	3.5	39,724	260

Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on December 13, 2000.

Emission Calculations

UNRESTRICTED POTENTIAL TO EMIT (UPTE):

The following calculations determine the unrestricted potential to emit (UPTE) from the existing exempted wood mulching operation, the compost, mulch, and wood shaving storage area, and the proposed wood chip manufacturing operation.

Existing Wood Mulching Operation:

Due to the moisture content of the wood mulching operation and the size of the mulch particles, it is determined that the existing exempted mulching operation will generate negligible emissions.

Wood Chip Manufacturing Operation:

The emissions generated by the wood chip manufacturing operation are combustion emissions from the dryer, the emissions generated from drying wood, and the emissions generated at the compost, mulch, and wood shaving storage area.

Combustion:

The following calculations determine the unrestricted potential to emit based on wood combustion, AP-42 emission factors (Chapter 1.6), a maximum capacity of 30.00 MMBtu/hr, 8,760 hours/yr, and emissions before controls.

Criteria Pollutants:

30.00 MMBtu/hr * 1E6 Btu/MMBtu * 1/9500 lb wood/MMBtu * 1 /2000 ton wood/lb wood = 1.58 tons wood/hr
Tons poll./yr = 1.58 tons wood/hr * Ef lb poll/ton wood * 8760 hr/yr * 1/2000 ton poll/lb poll

	PM 8.8 lb/ton	PM10 8.8 lb/ton	SO2 0.075 lb/ton	NOx 0.38 lb/ton	VOC 0.18 lb/ton	CO 6.6 lb/ton
ton/yr	**60.9**	**60.9**	**0.50**	**2.60**	**1.20**	**45.60**

HAPs:

The following calculations determine the unrestricted potential to emit based on wood combustion, AP-

42 emission factors (Chapter 1.6), a maximum capacity of 1.58 tons wood combusted per hour, 8,760 hours/yr, and emissions before controls.

HAP	Ef (lb/ton)	tons/yr
Phenols	1.47 E-4	neg.
Acrolein	4.00 E-6	neg.
Formaldehyde	8.20 E-3	0.06
Acetaldehyde	1.92 E-3	0.01
Benzene	9.95 E-3	0.07
Naphthalene	3.39 E-3	0.02
2, 3, 7, 8- Tetrachlorodibenzo-p-dioxin	3.60 E-11	neg.
2, 4, Dinitrophenol	4.23 E-6	neg.
4-Nitrophenol	2.97 E-6	neg.
	Total	**0.16**

Wood Drying:

The following calculations determine the wood drying unrestricted potential to emit based on the worst case wood dried (yellow southern pine), worst case dryer temperature (<900 F), AP-42 emission factors (Chapter 10.6.2), 8,760 hours of operation, and emissions before controls.

Tons poll./yr = 1.58 tons wood/hr * Ef lb poll/ton wood * 8760 hr/yr * 1/2000 ton poll/lb poll

Criteria Pollutants:

The proposed wood chip manufacturing operation utilizes a cyclone to recycle product, making the collector integral to the process. Thus, the particulate matter (PM) and PM10 unrestricted potential to emit is estimated based on emissions after controls. The control efficiency used is 85%.

PM: 1.58 tons/hr * 8.0 lb/ton * 8760 hrs/yr * 1/2000 ton/lb * (1 - 0.85) = 8.30 tons PM/yr
PM10: 1.58 tons/hr * 0.90 lb/ton * 8760 hrs/yr * 1/2000 ton/lb * (1 - 0.85) = 0.93 tons PM10/yr

	PM 8.0 lb/ton	PM10 0.90 lb/ton	SO2 0.002 lb/ton	NOx 1.10 lb/ton	VOC 0.95 lb/ton	CO 1.60 lb/ton
ton/yr	**8.30**	**0.93**	**0.01**	**7.61**	**6.57**	**11.07**

HAPs:

The following calculations determine the wood drying unrestricted potential to emit based on the worst case wood dried (yellow southern pine), worst case temperature (<900 F), AP-42 emission factors (Chapter 10.6.2), 8,760 hours of operation, and emissions before controls.

Tons poll./yr = 1.58 tons wood/hr * Ef lb poll/ton wood * 8760 hr/yr * 1/2000 ton poll/lb poll

HAP	Ef (lb/ton)	tons/yr
4,4 Methylene Dianaline	3.30 E-5	neg.
Acealdehyde	0.01	0.07
Acetophenone	6.40 E-5	neg.
Acrolein	3.00 E-3	0.02
Benzene	2.20 E-4	neg.
Biphenyl	3.90 E-5	neg.
Bis-(1-Ethylhexyl Phthalate)	3.20 E-4	neg.
Carbon Disulfide	1.80 E-5	neg.
Carbon Tetrachloride	1.20 E-5	neg.
Cumene	6.90 E-5	neg.
Formaldehyde	0.03	0.21
Hydroquinone	6.00 E-5	neg.
MEK	1.30 E-3	0.01
Methylene Chloride	6.60 E-4	neg.
Hexane	2.60 E-5	neg.
Nitrobenzene	1.70 E-5	neg.
Xylene	1.40 E-5	neg.
Styrene	1.20 E-4	neg.
Toluene	1.70 E-3	0.01
Vinyl Acetate	2.90 E-5	neg.
	Total	**0.32**

Compost, Mulch, and Wood Shaving Storage Area:

Due to the moisture content and the size of the particles stored, it is determined that the compost, mulch, and wood shaving storage area will generate negligible emissions.

Fugitive Emissions From Unpaved Roads:

The following calculations determine the PTE based on use of unpaved roads, emissions before controls, 8760 hr/yr, and AP-42 emission factors (Chapter 11.2.1).

2 trips/hr * 0.80 mile/roundtrip * 8760 hr/yr = 14,016 mi/yr

Ef = k * 5.9 * (s/12) * (S/30) * (W/3)^0.7 * (w/4)^0.5 * ((365-p)/365) = lb PM/mi = 2.46 lb PM/ mi

where:	k	=	0.8	(particle size multiplier)
	s	=	4.8	(% silt content of unpaved roads)
	p	=	125	(days of rain greater than or equal to 0.01 inches)
	S	=	10	(mi/hr vehicle speed)
	W	=	13	(tons average vehicle wt)
	w	=	18	(wheels)

PM: 2.46 lb PM/mi * 14,016 mi/yr * 1/2000 ton/lb = **17.24 ton PM/yr**
PM10: 35% PM = **6.03 ton PM10/yr**

Summary of Source UPTE:

Criteria Pollutants:

	PM tons/yr	PM10 tons/yr	SO2 tons/yr	NOx tons/yr	VOC tons/yr	CO tons/yr
Wood Mulching Operation	neg.	neg.	-	-	-	-
W C Dryer Combustion	60.9	60.9	0.50	2.60	1.20	45.60
W C Wood Drying	8.30	0.93	0.01	7.61	6.57	11.07
Unpaved Roads	17.24	6.03	-	-	-	-
Total	**86.44**	**67.86**	**0.51**	**10.21**	**7.77**	**56.67**

HAPs:

HAPs	tons/yr
Acetaldehyde	0.08
Acrolein	0.02
Benzene	0.07
Formaldehyde	**0.27**
MEK	0.01
Naphthalene	0.02

Toluene	0.01
Total	**0.48**

EMISSIONS AFTER CONTROLS:

The only controlled emissions are the PM and PM10 emissions from the unpaved roads which are controlled with the application of water on an as needed basis.

The following calculations determine the emissions after controls based on the estimated emissions before controls and a maximum control efficiency of 50%.

PM: 17.24 tons/yr * (1 - 0.50) = 8.62 tons PM/yr
PM10: 6.03 tons/yr * (1 - 0.50) = 3.02 tons PM10/yr
The following is a listing of the source emissions after controls.

Criteria Pollutants:

	PM tons/yr	PM10 tons/yr	SO2 tons/yr	NOx tons/yr	VOC tons/yr	CO tons/yr
Wood Mulching Operation	neg.	neg.	-	-	-	-
W C Dryer Combustion	60.9	60.9	0.50	2.60	1.20	45.60
W C Wood Drying	8.30	0.93	0.01	7.61	6.57	11.07
Unpaved Roads	8.62	3.02	-	-	-	-
Total	**77.82**	**64.85**	**0.51**	**10.21**	**7.77**	**56.67**

HAPs:

HAPs	tons/yr
Acetaldehyde	0.08
Acrolein	0.02
Benzene	0.07
Formaldehyde	**0.27**
MEK	0.01
Naphthalene	0.02
Toluene	0.01
Total	**0.48**

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	86.44
PM-10	67.86
SO_2	0.51
VOC	7.77
CO	56.67
NO_x	10.21

Worst Case Single HAP (tons/yr)	Worst Case Combined HAP (tons/yr)
0.27	0.48

The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of all single HAPs is less than ten (10) tons per year, the potential to emit (as defined in 326 IAC 2-7-1(29)) of the combined HAPs is less than twenty-five (25) tons per year, and the potential to emit (as defined in 326 IAC 2-1.1-1(16)) of all criteria pollutants are less than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-6.1.

County Attainment Status

The source is located in Floyd County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	moderate (Louisville CMSA)
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Floyd County has been designated as non-attainment for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.

(b) Floyd County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(c) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2, 40 CFR 52.21, or 326 IAC 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

New Source Status

New Source PSD and Part 70 Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Potential To Emit (tons/year)
PM	77.82
PM-10	64.85
SO_2	0.51
VOC	7.77
CO	56.67
NO_x	10.21

Worst Case Single HAP (tons/yr)	Worst Case Combined HAP (tons/yr)
0.27	0.48

(a) This new source is not a major PSD stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, no nonattainment area pollutant emissions are emitted at a rate or 100 tons per year or more, and it is not in one of the 28 listed source categories.

(b) This new source is not a major Part 70 stationary source (326 IAC 2-7) because no criteria pollutant emissions exceed the applicable level of 100 tons/yr, no single hazardous air pollutant (HAP) emissions exceed the applicable level of 10 tons/yr, and the combined HAP emissions do not exceed the applicable level of 25 tons/yr.

(c) This new source is not a Federally Enforceable State Operating Permit (FESOP) (326 IAC 2-8) source because no limitations or emission controls are used to limit the criteria pollutants to less than 100 tons per year, the single HAP emissions to less than 10 tons per year, and/or the combined HAP emissions to less than 25 tons/yr.

(d) This new source qualifies for a Minor Source Operating permit under 326 IAC 2-6.1 because the source emissions are greater than the applicable registration levels of 326 IAC 2-5.1-2 but less than FESOP levels under 326 IAC 2-8.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is not subject to 326 IAC 2-6 (Emission Reporting), because the VOC and NOx potential to emit (PTE), each, are less than the applicable level of 10 tons per year, and all other criteria pollutant PTE are less than 100 tons per year.

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2(1) (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 6-4 (Fugitive Dust Emissions)

Pursuant to 326 IAC 6-4, the Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

326 IAC 10:

326 IAC 10 does not apply to this source because:

(a) the NOx PTE (2.6 ton/yr) are less than the applicable level of 100 tons per year as specified in 326 IAC 10-1-1(a)(1),

(b) the source NOx PTE is not greater than or equal to 100 tons per year as specified in 326 IAC 10-1-1(a)(2) and there are no units at the source that emit NOx emissions greater than or equal to 40 tons per year, and

(c) there are no facilities constructed after the effective date of the rule that are subject to NSPS.

State Rule Applicability - Individual Facilities

326 IAC 6-3-2 (Process Operations)

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the wood chip manufacturing operation shall not exceed 30.08 pounds per hour when operating at a process weight rate of 19.58 tons per hour. This limitation is based on the following:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

E = 4.10 (P)^0.67 where: E = rate of emission in pounds per hour and
P = process weight rate in tons per hour (19.58 tons/hr)

The hourly unrestricted PM PTE emissions are estimated to be 19.74 lb/hr which is less than the 30.08 lb/hr limit. Thus, compliance is determined to be achieved.

86.44 tons PM/yr * 1/8760 yr/hr * 2000 lb/ton = 19.74 lb PM/hr

Compliance Requirements

The source particulate matter (PM) PTE exceeds 25 tons/yr. Thus, compliance monitoring and a preventive maintenance plan are required for this proposed source.

Compliance requirements are included in permits to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration.

When this occurs, the IDEM, OAQ, in conjunction with the source, must develop specific conditions that demonstrate compliance on a basis that is as close to continuous as possible. These compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements:

Compliance Determination Requirements, located in Section D of the permit, are those conditions that are found more or less directly within state and federal rules. Violation of these rules serves as grounds for enforcement action.

The limitations that are applicable to the source include the PM limitation of 326 IAC 6-3-2 (for the wood chip manufacturing operation), the source opacity limitations of 326 IAC 5, and the source fugitive emission limitations of 6-4.

326 IAC 6-3-2 limits the wood chip manufacturing operation to 30.08 lb PM/hr. Compliance with this limitation is determined by comparing the hourly unrestricted potential to emit (19.74 lb PM/hr) to the 326 IAC 6-3 limit (30.08 lb PM/hr).

326 IAC 6-4 requires the owner or operator to prevent fugitive dust from escaping beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located. Compliance with this requirement is determined during all inspections of the source.

326 IAC 5 requires the source to meet specific opacity limits. Compliance with the limits of this rule are also determined during all inspections of the source.

While these rules do establish the limits and a means by which compliance will be determined, they do not ensure that the source will be operating and maintaining the equipment (processes and controls) in such a manner that achieves the maximum reduction of emissions. Establishing a preventive maintenance plan does ensure that the source will be operated and maintained such that the minimum amount of emissions will be generated. Thus, a preventive maintenance plan for the wood chip manufacturing operation shall be required as part of the compliance determination.

Compliance Monitoring Requirements:

Compliance monitoring, also located in Section D of the permit, is required when the compliance determination requirements and/or the other means of determining compliance are not sufficient to demonstrate compliance on a “continuous” basis.

Compliance on a continuous basis is established for the PM limit of 326 IAC 6-3. However, continuous compliance with the limitations of 326 IAC 5 and 6-4 is not demonstrated. 326 IAC 5 and 6-4 include provisions that demonstrate compliance with the opacity and fugitive emission limits during all inspections of the source which is compliance determination over a long term period. These rules do not provide demonstration of compliance during the interim period between inspections. Thus, compliance monitoring shall be required to provide a means of demonstrating continuous compliance with the opacity and fugitive PM limitations of 326 IAC 5 and 6-4.

To demonstrate compliance on a more continuous basis, the owner or operator shall be required to perform daily visible emission notations of the wood chip drying operation stack RD-01. No visible emission notations shall be required for the wood mulching operation because the emissions are at exempt levels. The owner or operator shall also keep records of the daily visible notations observed and shall make the records available upon request of the OAQ.

Further, a condition shall be added to the permit requiring the source to shut down the wood chip manufacturing operation immediately and take the appropriate corrective actions if a failure of the wood chip manufacturing operation cyclone is detected. While the cyclone is considered integral to the process, the unrestricted potential to emit from the wood chip operation is determined based on emissions after controls. This requirement is necessary to ensure that the equipment is operating properly and that the source does not exhaust the emissions that are inadvertently collected during the product recovery process.

Conclusion

The construction and operation of the wood mulching and wood chip manufacturing operations shall be subject to the conditions of the attached proposed New Source Construction and Minor Source Operating Permit 043-13619-00054.